6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OW-2013-0262; FRL-9909-87-OW]

Re-Issuance of a General Permit to the National Science Foundation for the Ocean Disposal of Man-Made Ice Piers from its Base at McMurdo Sound in Antarctica

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice; final permit.

SUMMARY: EPA is re-issuing a permit authorizing the National Science Foundation (NSF) to dispose of ice piers in ocean waters. Permit re-issuance is necessary because the current permit has expired. Today, this renewed permit retains the conditions established in the previous general permit issuance.

DATES: This general permit is effective [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: This permit is identified as Docket No. EPA-HQ-OW-2013-0262. The record is closed but available for inspection from 9 a.m. to 4 p.m., Monday through Friday, excluding legal holidays, at the Water Docket, 1301 Constitution Avenue, N.W., Room B-135, Washington, DC 20460. For access to docket materials, call (202) 566-2426, to schedule an appointment.

FOR FURTHER INFORMATION CONTACT: Ryan Gross, Environmental Engineer, Marine Pollution Control Branch, Oceans and Coastal Protection Division (4504T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460; telephone (202) 566-1810.

SUPPLEMENTARY INFORMATION:

On February 14, 2003, EPA issued a general permit to the NSF for ocean disposal of man-made ice piers from its base at McMurdo Sound in Antarctica. The Marine Protection, Research, and Sanctuaries Act (MPRSA) section 104(a) provides that permits shall be issued for a period not to exceed seven years, 33 U.S.C. 1414(a). This general permit has expired, but remains in effect under the Administrative Procedure Act, 5 U.S.C. 558(c) because NSF filed a timely and sufficient application for renewal prior to expiration. EPA published a notice proposing renewal of the permit on May 9, 2011 (76 FR 26721). Therefore, today's action by the EPA finalizes the provisions of the general permit and extends the terms of the 2003 permit for another seven-year period.

EPA re-issues the general permit under sections 102(a) and 104(c) of the MPRSA to authorize the NSF to dispose of man-made ice piers in ocean waters from its base at McMurdo Sound in Antarctica. The NSF is the agency of the United States Government responsible for oversight of the United States Antarctic Program. The NSF currently operates three major bases in Antarctica: McMurdo Station on Ross Island, adjacent to McMurdo Sound; Palmer Station, near the western terminus of the Antarctic Peninsula; and Amundsen-Scott South Pole Station, at the

geographic South Pole. McMurdo Station is the largest of the three stations and serves as the primary logistics base for the Antarctica operations of NSF. The great majority of personnel and supplies destined for the three stations are unloaded from ships docked at the McMurdo Station ice pier. This man-made pier has a normal life span of three to five years. NSF constructed the current ice pier in 2012.

When an ice pier is at the end of its effective life, all transportable equipment, materials, and debris are removed. The pier is then cast loose from its moorings at the base and is towed out to McMurdo Sound for disposal, where it melts naturally. Issuance of this general permit is necessary because the pier must be towed out to sea for disposal at the end of its effective life. In accordance with Section 104(c) of the MPRSA, 33 U.S.C. 1414(c) and implementing regulations at 40 CFR 220.3, the terms and conditions of this general permit are designed to protect the marine environment, including through specification of operating conditions applicable over the life of the pier, as well as required clean-up actions, with which the NSF must comply before the disposal of any ice pier.

A. Background on McMurdo Station Ice Pier

The construction of the ice pier at McMurdo Sound Station was explained in the Federal Register notice of January 7, 2003 (68 FR 775), and remains largely similar today. The current pier, however, contains fewer materials and is about half the size of the 2003 ice pier, and measures 354 feet long, 200 feet wide, and 15 feet thick. The current pier contains the following types and approximate quantities of materials: (a) 11,500 feet of one-inch steel cable embedded 5 feet from the bottom; (b) a 6 inch by 6 inch steel mesh embedded 10 feet from the bottom; (c) 650 feet of

two-inch steel pipe; (d) eight steel bollards; and (e) 1,750 cubic yards of local gravel, 2 cm or smaller in size. When the pier has deteriorated to the point that it is not capable of being used the following season, the gravel is scraped off for use in the following season; all transportable equipment, materials, and debris are removed; and the pier is physically separated from its attachment to McMurdo Base at the end of the austral summer. The defunct pier is then towed by a U.S. Coast Guard cutter into McMurdo Sound past the distal end of the open channel in the ice, as near to the Ross Sea currents as possible. The pier is released in a direction that allows it to flow with the Ross Sea currents, away from the open channel in the ice. The pier then floats free within the ice pack, where it mixes with the annual sea ice and eventually disintegrates. The materials dumped under this general permit (other than ice, which melts naturally) include those materials used in construction of the ice pier that cannot be removed prior to disposal.

For background information on the McMurdo Station ice pier, the reader is referred to the Federal Register notice of January 7, 2003 (68 FR 775), which is hereby incorporated by reference into this notice. The 2003 notice summarizes the permit action and provides supplementary information on several relevant topics. The 2003 notice also describes the history of NSF operations at McMurdo Station, the construction of the ice pier, and EPA's legal basis for issuance of the permit. The 2003 notice explains how the potential effects of the ice pier disposal on the human health and the environment were evaluated through testing and consultation with other agencies and determined to present a very small risk to the marine environment. The 2003 notice discusses EPA's basis for the conditions in the permit, including tracking and reporting requirements, and how the permit satisfies requirements of other relevant

federal statutes. None of the facts regarding the background of the McMurdo Station Ice Pier described in Section A of the January 7, 2003, notice have changed.

B. Statutory and Regulatory Background

1. Marine Protection, Research, and Sanctuaries Act (MPRSA)

Section 102(a) of the MPRSA, 33 U.S.C. 1412(a) requires that agencies or instrumentalities of the United States obtain a permit to transport any material from any location for the purpose of dumping into ocean waters. MPRSA Section 104(c), 33 U.S.C. 1414(c), and EPA regulations at 40 CFR 220.3(a) authorize the issuance of a general permit under the MPRSA for the dumping of materials which have a minimal adverse environmental impact and are generally disposed of in small quantities. The towing of ice piers by the USCG from McMurdo Station for disposal at sea constitutes transportation of material for the purpose of dumping in ocean waters, and thus is subject to the MPRSA. EPA has determined that ocean disposal of the material associated with the ice piers is likely to cause only a minimal adverse environmental effect and represents comparatively small quantities of unrecoverable non-ice materials.

2. Obligations under International Law

The Antarctic Science, Tourism, and Conservation Act of 1996 amended the Antarctic Conservation Act of 1978. This law is designed to implement the provisions of the Protocol on Environmental Protection to the Antarctic Treaty ("the Protocol"). The United States Senate ratified the Protocol on April 17, 1997, and it entered into force on January 18, 1998. The Protocol builds on the Antarctic Treaty to extend its effectiveness as a mechanism for ensuring protection of the Antarctic environment. The Protocol designates Antarctica as a natural reserve,

devoted to peace and science, and sets forth basic principles and detailed, mandatory rules applicable to human activities in Antarctica. The Protocol prohibits all activities relating to mineral resources in Antarctica, except for scientific research, and commits signatories to the Protocol (known as Parties) to environmental impact assessment procedures for proposed activities, both governmental and private. Among other things, the Protocol also requires Parties to protect Antarctic flora and fauna, and imposes strict limitations on disposal of wastes in Antarctica and discharges of pollutants into Antarctic waters.

Several sets of regulations implement the legislation that, in turn, implements the Protocol, including: (a) NSF regulations regarding environmental impact assessment of proposed NSF actions in Antarctica (45 CFR part 641); (b) NSF waste regulations for Antarctica (45 CFR part 671); and (c) EPA regulations regarding environmental impact assessment of non-governmental activities in Antarctica (40 CFR part 8).

In this regard, EPA notes that the NSF completed a United States Antarctic Program (USAP) Environmental Impact Statement (EIS) (June 1980), a USAP Final Supplemental Environmental Impact Statement (SEIS) (October 1991), and an Initial Environmental Evaluation (May 1992). Since then, the NSF issued two Records of Environmental Review: Installation of Freeze Cells in Ice Piers (1998) and Use of Freeze Cells in Ice piers to Repair Cracks (2000). All these documents address various aspects of the construction, operation, and disposal of ice piers at McMurdo Station in Antarctica. None of these documents identify any potential environmental impacts from the disposal of ice piers. EPA considered the analyses contained in these five documents in re-issuance of the general permit for the NSF. The documents are available for

review through the EPA docket for this action and at the Office of Polar Programs of the NSF, 4201 Wilson Boulevard, Arlington, VA 22230.

C. Potential Effects of Ice Pier Disposal

EPA's decision is based on findings regarding three areas of the ocean disposal of ice piers in ocean waters off the Antarctic: (1) The fate of the materials disposed in the ocean; (2) the potential effects of ice pier disposal on organisms in the polar environment, including whales, seals, bird species, and endangered and threatened species; and (3) environmental concerns associated with any operational discharges, leaks, or spills that may have contaminated the surface of the pier.

The materials contained in the ice pier that cannot be removed (11,500 feet of one-inch steel cable, steel mesh, steel bollards, and 650 feet of two-inch steel pipe) will, eventually, sink to the sea floor after the surrounding ice has melted. While the ice is slowly melting into the Antarctic Sea or the Southern Ocean, it is possible that steel mesh or loops of cable from partially melted layers of ice may hang temporarily from the floating pier. However, considering the normal behavior and mating habits of whales, seals, and sea birds, it is unlikely that these materials pose any danger to these species. Furthermore, EPA consulted both the Fish and Wildlife Service (FWS) in the Department of the Interior and the National Marine Fisheries Service (NMFS) in the Department of Commerce, and both agencies concluded that the disposal will not have any effect on endangered or threatened species.

In 1993 and, again, in 1994, NSF sampled the ice on the surface of the pier to assess the potential for contamination from discharges of gasoline and antifreeze. Contamination was detected in only one location directly under two 55-gallon fuel drums. In response, NSF issued a directive that all fuel drums shall be underlain with secondary containment methods. Also, as one of the conditions of the 2003 permit, NSF developed and now implements a spill prevention, control, and countermeasure (SPCC) plan for all the stations and bases under NSF jurisdiction in Antarctica to reduce the potential for adverse effects associated with any such spills. That plan, updated in 2012, is titled: Spill Prevention, Control, and Countermeasure (SPCC) Plan, McMurdo Station, McMurdo Sound, Antarctica. The SPCC plan includes a section addressing fuel storage and transfer systems for the ice pier at McMurdo Station. With the implementation of new protective measures in the updated 2012 plan, such as longer length hoses for unloading petroleum products from the annual supply tanker and new precautions taken in the handling and return to bases outside Antarctica of used or contaminated chemicals, solvents, and hazardous materials, the risks of any spill or any discharge of these materials is now lower than under the 2003 SPCC plan. There is considerable vehicular traffic on the ice pier during the austral summer season, and the possibility of engine block leaks or discharges from these vehicles cannot be totally avoided. However, NSF has provided EPA reasonable assurance that every effort to mitigate the risk of leakages or discharges is being taken, including limits on the time that vehicles are parked on the pier and that no vehicles are ever parked on the pier overnight.

D. Discussion

Considering the information presented in the previous section, EPA finds that the potential effects of this disposal are minimal and in accordance with the statutory standards applicable to permit issuance under the MPRSA.

The general permit that EPA today re-issues to NSF and its agents for the ocean disposal of man-made ice piers from the NSF research station at McMurdo Sound, Antarctica, is subject to eight specific conditions applicable during the use and disposal of ice piers.

First, the general permit requires that NSF continue to maintain and implement an SPCC plan, consistent with the requirements of 40 CFR 112.3, for the ice pier that addresses:
(1) The unloading of petroleum products from supply tankers to the storage tanks at McMurdo Station;
(2) The unloading of drummed chemicals, petroleum products, and material from cargo freighters to supply depots at McMurdo Station;
(3) The loading of materials to freighters destined to be returned to bases outside Antarctica; and
(4) Methods to minimize the accidental release or discharge of any products to the ice pier.

Second, the general permit requires that the following clean-up and reporting procedures must be followed by NSF in the event of a spill or discharge on the ice pier:
(1) All spills or discharges must be cleaned up as soon as possible.
(2) If a spill or discharge occurs, clean-up procedures must be completed with a performance level such that no visible evidence of the spill or discharge remains.

Third, as part of normal permit monitoring requirements, an official record of the following information shall be kept by NSF:

(1) The date and time of all spills or discharges, the location of the spill or discharge, a description of the material that was spilled or discharged, the approximate volume of the spill or discharge, clean-up procedures employed, and the results of clean-up procedures;

(2) The approximate amount of the steel cables, steel pipe and steel mesh remaining in the ice pier at the time of its release;

(3) Any other visible substances remaining on the ice pier at the time of its release; and

(4) The date of detachment of the ice pier from McMurdo Station, and the geographic coordinates (latitude and longitude) of the point of final release of the pier in McMurdo Sound.

Fourth, the non-embedded ends of all wooden utility poles shall be cut off from the ice pier prior to disposal and shall not be disposed of in the ocean. Though the current ice pier design does not call for wooden poles, this condition is retained in case wooden poles are installed in the future.

The fifth condition requires certain actions be performed in preparation for disposal of the ice pier. All objects, excluding those embedded in the ice, shall be removed from the ice pier. This includes the removal, to the extent practicable, of the gravel surface. Also, NSF shall establish and implement a methodology to track the ice pier for one year after release. Such methodologies could include the use of satellite-tracked pingers placed on the ice pier, or any other methodology that enables data collection on the course, speed, and location of the ice pier. The permit requires the monitoring period of one year because that length of tracking data is expected

to provide adequate evidence concerning the movement of the ice pier until it has completely melted and the ultimate fate of the materials in the pier.

When EPA first issued this permit, the Agency explained that if tracking results from the first three ice piers tracked after being disposed of from McMurdo Station demonstrated that all ice piers generally followed the same path over the same length of time for the one year following release, then EPA would consider whether it would require further tracking efforts and reporting under any future versions of this permit. To date, only two ice piers have been tracked after leaving McMurdo Station, in 1999 and 2011. Both of these ice piers followed similar paths in a general north-northwesterly direction into the Ross Sea after release or detachment. NSF has been unable to implement a tracking methodology with any other piers because all other piers have either broken away or inadvertently detached from the station. Tracking information from a third ice pier should provide adequate data to determine whether future detached piers follow the same general path and whether tracking requirements should be included in future versions of this permit.

Sixth, the general permit requires that NSF submit a report to the Director of the Oceans and Coastal Protection Division, in the EPA's Office of Water, by June 30 of every year as part of the annual reporting requirements. The report needs to inform EPA of: (1) Any spills, discharges, or clean-up procedures on the ice pier at McMurdo Station, (2) any ocean disposal of ice piers from McMurdo Station, and (3) any tracking efforts of ice piers disposed of from McMurdo Station under this general permit for the year preceding the date of the report.

The seventh and eighth conditions define the term “ice pier” and explain that the permit shall be valid for seven years, as per the MPRSA, respectively.

Any contaminants remaining on the surface of the piers after release are expected to be minimal and insignificant. The area over which the melting and disintegration of the piers occurs is immense. Thus, the dilution of contaminants in ocean waters should be adequate such that the potential for damage to the environment from ocean disposal of any McMurdo Station ice piers is minimal. In addition, the possibility of entanglement of large organisms in suspended loops of cable from the melting ice piers has been determined by EPA to be very minimal. (Further discussion of this issue can be found in "C. Potential Effects of Ice Pier Disposal," above.)

Finally, the re-issuance of this permit to NSF does not in any way relieve NSF of meeting the United States’ obligations under the Antarctic Protocol, the Antarctic Conservation Act, or the implementing regulations.

E. Responses to Comments Received

EPA received one comment during the public comment period. The comment raised objections to the reissuance of the permit on the basis that: The pier should be reused rather than dumped; the EIS from 1980 is no longer applicable; the danger of a chemical spill was underestimated; the impact on endangered species is not known; and the pier should be tracked for a longer period of time.

EPA disagrees that these concerns warrant rejecting the permit re-issuance application. The pier cannot be used for more than 3-5 years because damage sustained through normal use over time makes continued use unsafe. The findings of the 1980 EIS and the 1991 SEIS still validly show that the adverse impact of the ice pier on the environment will be minimal notwithstanding the passage of time because the conditions required by the permit today are similar to or more protective than the conditions required at that time. EPA has concluded discussions with FWS and NMFS regarding the risk of entanglement to marine species and agreed that no effect is anticipated from that hypothetical situation. Finally, tracking the released ice pier for one year has allowed EPA and NSF to confidently determine the fate of materials used in the ice pier's construction. If future tracking data indicates that more than one year of tracking is needed to make this determination, then EPA will consider requiring a longer duration of tracking in future versions of this permit.

F. Statutory and Executive Order Reviews

1. Paperwork Reduction Act

The Paperwork Reduction Act, 44 U.S.C. 3501 et seq., is intended to minimize the reporting and record-keeping burden on the regulated community, as well as to minimize the cost of Federal information collection and dissemination. In general, the Act requires that information requests and record-keeping requirements affecting ten or more non-Federal respondents be approved by the Office of Management and Budget. Because this general permit affects only Federal agency record-keeping and reporting requirements, it is not subject to the requirements of the Paperwork Reduction Act.

2. Endangered Species Act

The Endangered Species Act (ESA) imposes duties on Federal agencies regarding endangered species of fish, wildlife, or plants and designated critical habitats. Section 7(a)(2) of the ESA and its implementing regulations (50 CFR Part 402) require agencies like EPA to ensure, in consultation with the Secretary of the Interior or of Commerce, that any action authorized, funded, or carried out by EPA in the United States or upon the high seas, is not likely to jeopardize the continued existence of any endangered or threatened species, or adversely affect their critical habitat.

In accordance with Section 7 of the ESA, EPA requested and received from both FWS and NMFS an endangered species list for the affected area of ocean disposal of ice piers from the NSF facility at McMurdo Station in Antarctica. No endangered, threatened, or candidate species are reported to potentially occur in the affected area.

EPA has discussed this matter with both FWS and NMFS, who have concluded that the ocean disposal of ice piers by NSF or its agents from McMurdo Station in Antarctica will have no effect on endangered or threatened species.

For the reasons stated above, EPA re-issues the general permit for NSF as follows:

Disposal of Ice Piers from McMurdo Station, Antarctica

The United States National Science Foundation (NSF) and its agents are hereby granted a general permit under sections 102(a) and 104(c) of the Marine Protection, Research, and

Sanctuaries Act, 33 U.S.C. 1412(a) and 1414(c), to transport ice piers from the McMurdo Sound, Antarctica, research station for the purpose of ocean dumping, subject to the following conditions:

(A) The NSF shall implement a spill prevention, control, and countermeasure (SPCC) plan, consistent with the requirements of 40 CFR 112.3, for the McMurdo Station ice pier. The SPCC plan shall address procedures for loading and unloading the following materials, and shall include methods to minimize the accidental release or discharge of any of the following materials to the ice pier:

(1) Petroleum products unloaded from supply tankers to the storage tanks at McMurdo Station;

(2) Drummed chemicals, petroleum products, and materials unloaded from cargo freighters to supply depots at McMurdo Station; and

(3) Materials loaded to freighters destined to be returned to bases outside Antarctica.

(B) If a spill or discharge occurs on an ice pier, clean-up procedures must be completed by NSF or its contractors with a performance level such that no visible evidence of the spill or discharge remains. All spills or discharges on an ice pier should be cleaned up soon as possible.

(C) As part of normal monitoring requirements, a record of the following information shall be kept by NSF:

(1) The date and time of all spills or discharges, the location of the spill or discharge, a description of the material that was spilled or discharged, the approximate volume of the spill or discharge, clean-up procedures employed, and the results of the clean-up procedures;

(2) The approximate length of the steel cables, steel pipe, and steel mesh remaining in the ice pier at the time of its release;

(3) Any other visible substances remaining on the ice pier at the time of its release; and

(4) The date of detachment of the ice pier from McMurdo Station, and the geographic coordinates (latitude and longitude) of the point of final release of the pier in McMurdo Sound or the Antarctic Sea.

(D) The non-embedded ends of all wooden utility poles and wooden bollards will be cut off from the ice pier prior to disposal, and shall not be disposed of in the ocean.

(E) Prior to the ocean disposal of any ice piers, the following actions shall be taken by NSF:

(1) Other than the matter embedded in the ice pier (i.e., the ends of light poles or bollards frozen in the pier, and the strengthening cables), all other objects (including the non-embedded portions of bollards used for maintaining a connection between the pier and the mainland, the non-embedded portions of poles used for lighting, power, or telephone connections, and any removable equipment, debris, or objects of anthropogenic origin), shall be removed from the pier.

(2) The gravel non-slip surface of the pier shall be removed to the maximum extent practicable and stored on the mainland for subsequent use.

(3) NSF shall implement a methodology to track the ice pier disposed of under this permit for a period of one year after disposal. NSF shall include the tracking data from this effort in the annual report that NSF is required to submit to EPA.

(F) NSF shall submit a report by June 30 of every year to the Director of the Oceans and Coastal Protection Division, in EPA's Office of Water, on (1) any spills, discharges, or clean-up procedures on the ice pier at McMurdo Station, (2) any ocean disposal of ice piers from McMurdo Station, and (3) any tracking efforts of ice piers released from McMurdo Station under this general permit for the year preceding the date of the annual report.

(G) For the purpose of this permit, the term "ice pier(s)" means those man-made ice structures containing embedded steel cable, mesh, and pipe, and any remaining gravel frozen into the surface of the pier, that are constructed at McMurdo Station, Antarctica, for the purpose of off-loading the annual provision of material and supplies for the base at McMurdo Station and other U.S. Antarctic bases, and for loading the previous year's accumulation of wastes, which are returned to the United States.

(H) This permit shall be valid for a period of seven years beginning 30 days after the date of publication in the Federal Register.

Dated: April 2, 2014.

Paul Cough,

Director, Oceans and Coastal Protection Division.

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